

Cancer
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What is cancer?

Cancer is a group of many related diseases that begin in cells, the body's basic unit of life. The body is made up of many types of cells. Normally, cells grow and divide to produce more cells only when the body needs them. This orderly process helps keep the body healthy. Sometimes cells divide without control producing new cells when they are not needed. These extra cells form a mass of tissue, called a growth or tumor.

A tumor can be benign or malignant. Cells from a benign tumor will not spread to other parts of the body and are rarely a threat to life. Benign tumors are not cancer. Cancer is a term for diseases in which abnormal cells in malignant tumors divide without control and continue to do so when new cells are not needed. They can invade and damage nearby tissues and organs.

Cancer can begin in many areas or sites of the body. Most cancers are named for the organ or type of cell in which they begin. Lung cancer, for instance, is cancer that begins in the lung, and cancer that begins in cells in the skin is called melanoma. Also, cancer cells can break away from a malignant tumor and enter the bloodstream or the lymphatic system. That is how cancer spreads from the original cancer site to form new tumors in other organs. The spread of cancer is called *metastasis*.³⁵

Why is cancer an important health issue for Detroiters?

Awareness of cancer risks and taking precautions for early detection are critical. Over time, cancer has a significant impact on a person's health. There is no cure, although science continues to develop information for understanding cancer, and improving treatment options. The progression of the disease creates costs in various areas of life for those who have cancer conditions. As cancer progresses, a patient experiences more pain, needs more treatment, and loses the capacity to function as healthy individuals do.

Ultimately, cancer can be a fatal condition. Cancer has consistently been the second leading cause of death in Detroit, the State of Michigan, and the United States. In many cases, if diagnosed in an early stage, it is more likely that treatment will be effective and the patient will live a longer life. The more we can learn about what causes cancer, the more likely we are to find ways to manage and prevent it.

The health community does not fully understand why people develop cancer. It is clear, though, that cancer cannot be caused by an injury. Being infected with certain viruses may increase the risk of some types of cancer, but cancer is not contagious. Cancer develops over time. It is a result of a complex mix of factors related to lifestyle, heredity, and environment.

A number of factors that increase a person's chance of developing cancer have been identified. Many types of cancer are related to the use of tobacco, what people eat and drink, exposure to ultraviolet (UV) radiation from the sun, and, to a lesser extent, exposure to cancer-causing agents in the environment and the workplace. Some people are more sensitive than others to factors that can cause cancer. Some cancer risk factors can be avoided. Others, such as genetic factors, are unavoidable, but it may be helpful to be aware of them. People can help protect themselves by avoiding known risk factors, having regular checkups, and discussing with health care providers whether any of the cancer screening tests could be of benefit to them.³⁴

Cancer in Detroit

During the 1990s, national rates of cancer deaths and diagnoses declined. Michigan cancer deaths were fairly stable throughout the nineties, hovering between 21.7 (deaths per 10,000 residents) in 1990 and 20.5 in 2000. Detroit rates declined, as well; the 2000 rate (21.6) was slightly higher than all Michigan residents (See Figure 16).^{††††}

The Michigan cancer incidence rate (49.2 cases per 10,000 residents) remains below the 1991 and 1992 peak of 54.8 per 10,000 persons (as shown in Figure 17). While the age adjusted incidence rate for Michigan had fallen to 48.8 in 1998, the incidence for Detroit was 53.4; just below Michigan's peak rate in

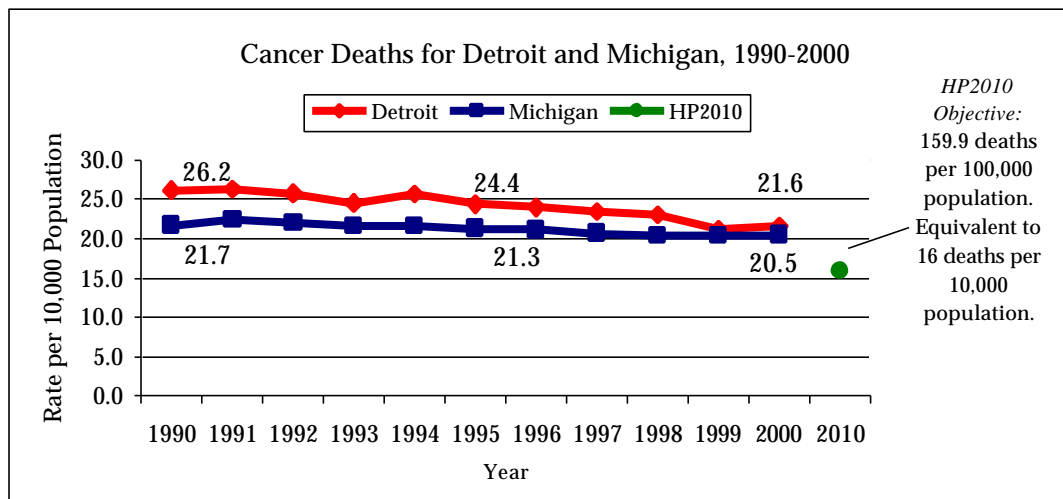


Figure 16

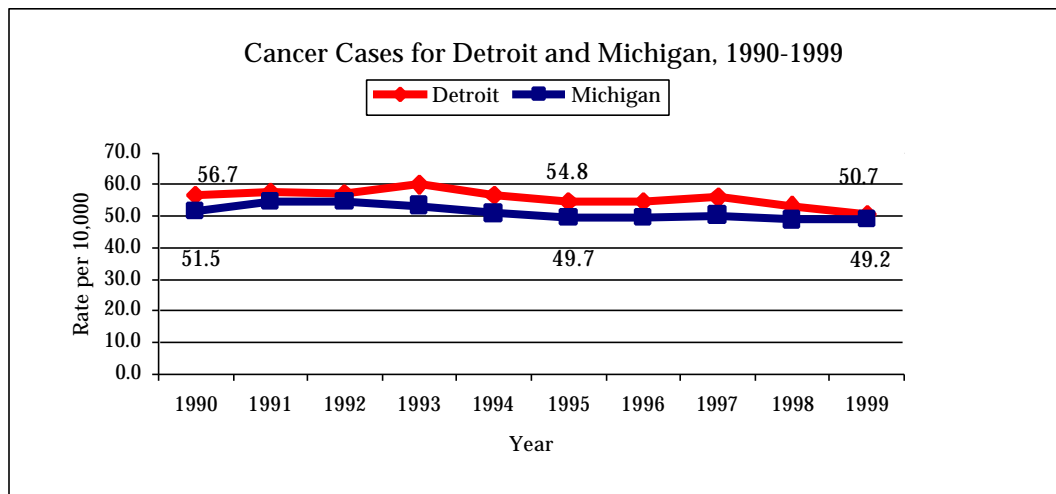


Figure 17

^{††††} Though general statistics are discussed, United States level data are not presented in figures for this report. The most recent United States level cancer data (1997/1998) is not comparable to current Detroit and Michigan data due to differences in the age adjustment standard. Cancer data for Detroit and Michigan for 1999 and 2000 were drawn from Michigan Department of Community Health (MDCH), Division for Vital Records and Health Statistics. Rates are age-adjusted and were computed by the direct method, using as the standard population the age distribution of the total population of the United States for the year 2000. Underlying causes of death for 1990-1998 were classified in accordance with the Ninth Revision of the International Classification of Diseases (ICD-9). Beginning in 1999, causes of death were classified using ICD-10. Comparability is high between the cancer classifications from ICD-9 and 10. According to MDCH, the change should have little or no impact on mortality rate comparisons over time.

1991 and 1992. Detroit's peak cancer incidence rate was 60.0 in 1993. In 1999, the Detroit cancer incidence rate was, 50.7, the lowest in the decade.

HP2010 seeks to reduce cancer deaths to 16 deaths per 10,000 population in the year 2010.***

Many areas of the body can develop cancerous cells, and the disease may present in various ways depending upon the function of the organ(s) and tissues affected. The remainder of this report will focus upon lung, colon, breast and prostate cancers, as mortality rates have been highest for Detroit residents at these sites.

LUNG CANCER

Lung cancer, as well as prostate, breast, and colorectal cancers presented higher rates in Detroit than in Michigan in 2000. Lung cancer is the second leading cancer diagnosis, and the leading cause of cancer-related death for Detroit and the rest of the country.

Tobacco use, increasing age, a family history of lung cancer, exposure to asbestos or other cancer-causing agents in the environment or workplace are all risks that may result in lung cancer.^{36, 37} Yet, more than 95 percent of diagnoses are thought to result from tobacco use.

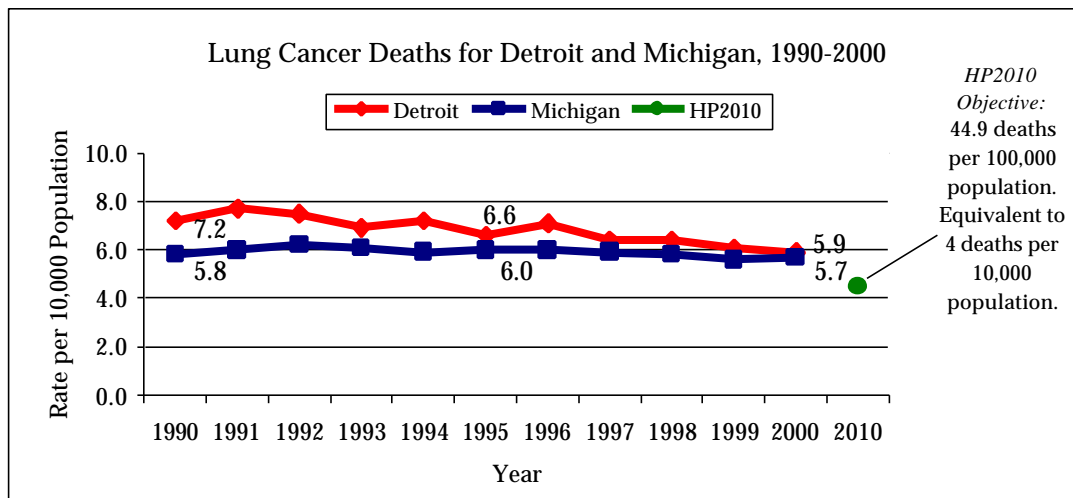


Figure 18

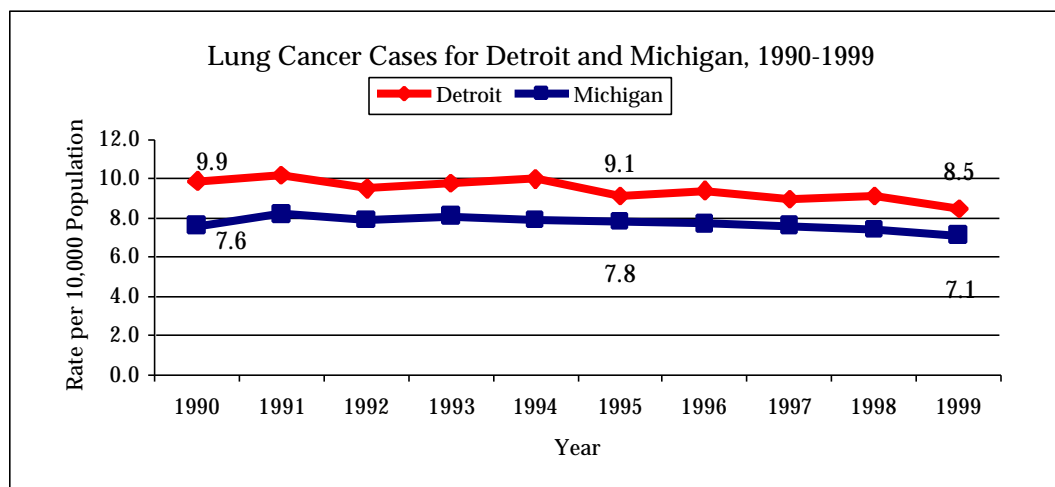


Figure 19

*** Throughout this report, Detroit and Michigan rates are expressed "per 10,000" in the respective populations and is not to be confused with rates that are expressed per 100,000. National *HP2010* objectives related to cancer have been translated from "per 100,000" to "per 10,000" expressions to aid *Profile* users of this section. Please see *HP2010* notes in the charts for "per 100,000" expressions.

According to the National Cancer Institute, tobacco use is the most preventable cause of death in the United States. Each year smoking tobacco, smokeless tobacco, and the inhalation of environmental ("second-hand") smoke are responsible for one third of the cancer death total in the United States.³⁵ Nonetheless, 72 percent of Michigan high school students and nearly 67 percent of the Detroit students who participated in a 1999 national survey reported using a cigarette in their lifetime. Twenty seven percent of the Michigan students and 10 percent of the Detroit students reported having smoked cigarettes *daily*.¹² Non-smoking spouses of smokers have a 30 percent greater risk of developing lung cancer than spouses of non-smokers.³⁶ Smoking is the leading risk factor for lung cancer, and accounts for more than 85 percent of all lung cancer deaths.³⁷

In the Detroit, lung cancer deaths have shown some decline since 1997, contributing to relatively stable rates through 2000 for the entire state (see Figure 18). In 2000, the city and state rates were very close, at 5.9 and 5.7 per 10,000 residents respectively. Though higher than Michigan rates, the incidence of lung cancer has shown a decline for the fifth consecutive year in Detroit (see Figure 19). The 2000 lung cancer incidence rates were 8.5 in Detroit and 7.1 for the state.

PROSTATE CANCER

Prostate cancer has been the most frequently diagnosed cancer in Michigan since 1991. It was the second leading cause of cancer deaths among Michigan men in 1998. Almost 70% of Michigan men diagnosed with prostate cancer in 1997 were between the ages of 50 and 74, and more than 27% were 75 years old or older.³⁸

Factors that have been associated with risk for prostate cancer include age (prostate cancer is found mainly in men over 55 years of age), a close family history of prostate cancer, and a high-fat diet.³⁹ The age

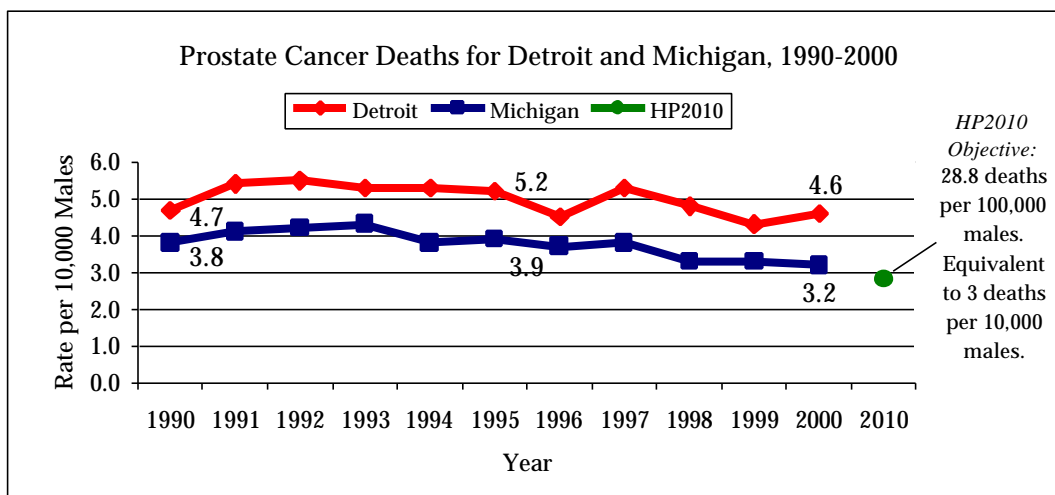


Figure 20

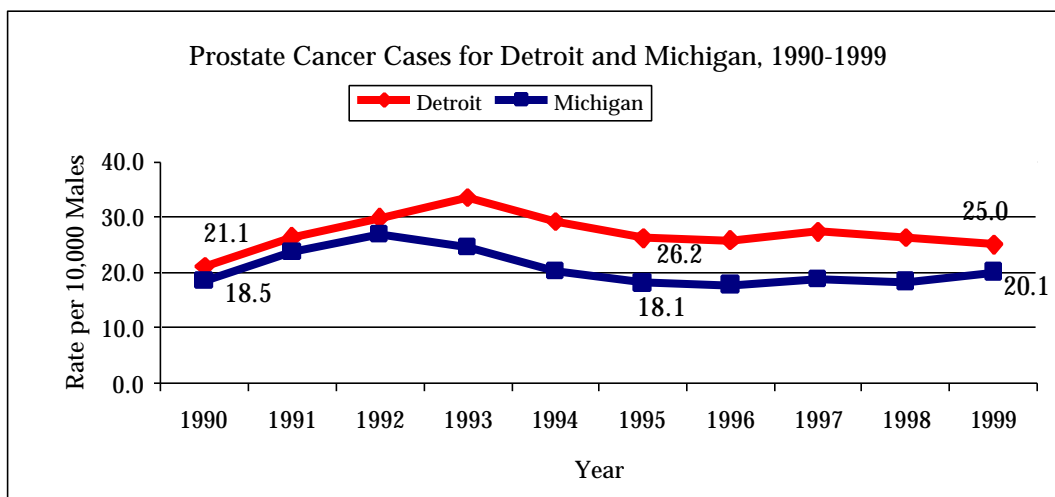


Figure 21

adjusted prostate cancer mortality rate dropped slightly from 3.3 in 1998 and 1999 to 3.2 deaths per 10,000 men throughout Michigan in 2000 (as shown in Figure 20). The mortality rate increased, however, for Detroit men from 4.3 in 1999 to 4.6 in 2000.

In 2000, Detroit and Michigan incidence rates for prostate cancer exceeded those of lung, breast and colorectal cancer. Even more striking is the contrast between Detroit and Michigan prostate cancer rates. An average of 6 more men per 10,000 in Detroit were diagnosed with prostate cancer from 1990 to 1999. As shown in Figure 21, the incidence of prostate cancer in Detroit has exceeded that of the rest of the state throughout the 1990s. There was more disparity between the city and the state rates in the early to mid nineties. Michigan rates for prostate cancer peaked in 1992 at 26.9, and began to show a steady decline beginning in 1993. Detroit rates peaked in 1993 at 33.4 per 10,000 men, and began to decline in 1994. From 1995 to 1999, the rate for Detroit men slightly decreased from 26.2 to 25 new cases per 10,000 Detroit men, while the rate for all Michigan men increased from 18.1 to 20.1 male residents.

The difference is related to the higher proportion of Detroit men who are Black. Black males have the highest incidence of prostate cancer in the world and suffer 2-3 times higher mortality than their White counterparts.⁴⁰ According to the 2000 Census, Detroit's population was 81% Black. Similarly, 80% of the city's men were Black. In contrast, 80% of the state population was White; 80% of the state's men were White. More than half (53%) of the Black men in Michigan were Detroit residents in 2000. For the most part, excessive prostate cancer risk and mortality for Black men is not understood.

HP2010 seeks to reduce deaths prostate cancer deaths to 3 per 10,000 men.

BREAST CANCER

Breast cancer is the most frequently diagnosed cancer among Michigan women and third most commonly diagnosed cancer overall.⁴¹ Every woman is at risk for developing breast cancer, but some factors contribute to increased risk, including:

increasing age,
history of breast
cancer in an

immediate family member, never giving birth, or having the first child after age 30, and a long menstrual history. Some breast cancer is inherited due to strong genetic factors.⁵⁰

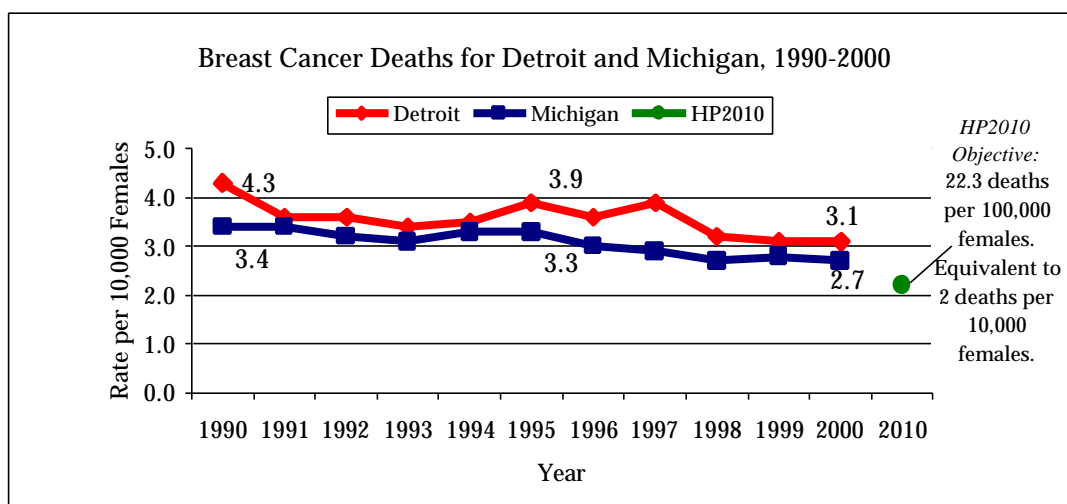


Figure 22

As with many cancers, when breast cancer is diagnosed at an early stage, it is most treatable. All women should do a self-exam every month. In addition to a monthly self-exam, it is recommended that women under the age of forty receive a clinical breast exam every three years.

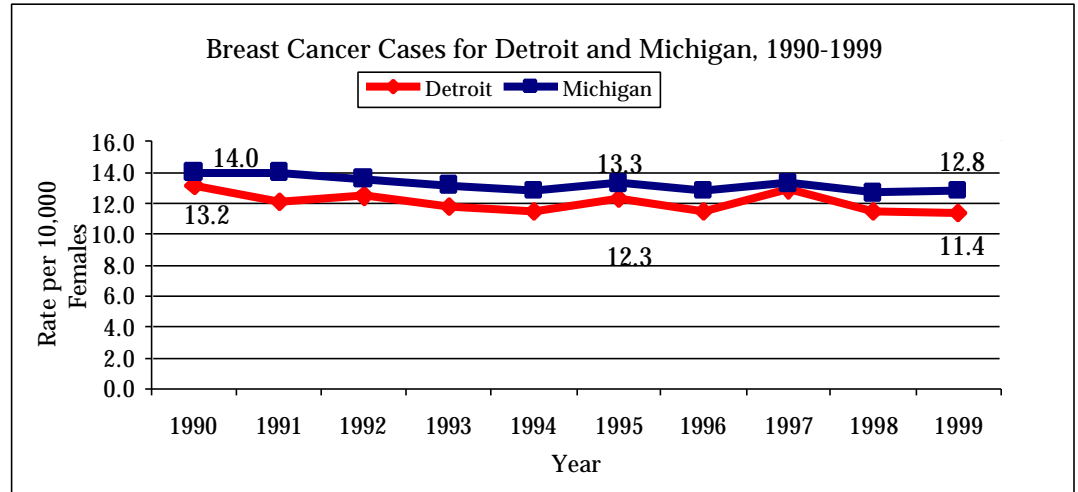


Figure 23

Detroit's breast cancer death rates throughout the 1990s to 2000 were more variable and higher than those for the entire state (see Figure 22). In 2000, there were 3.1 deaths per 10,000 Detroit women and 2.7 deaths per 10,000 Michigan women. From 1990, there was an overall decrease in breast cancer mortality in Detroit and the rest of the state. Breast cancer incidence throughout the nineties was higher for Michigan women overall than for Detroit women. In 2000, 11.4 breast cancer cases per 10,000 Detroit women were diagnosed, while 12.8 cases were diagnosed for women throughout the state.

Higher incidence rates for breast cancer in the state (as shown in Figure 23) and higher mortality rates for breast cancer in the city are largely due to population differences. White women have the highest incidence of breast cancer, but women of color have the highest mortality rates. Black women, for instance, are 31% more likely than White women to die from breast cancer. This is partly due to a tendency for later diagnosis among Black women, which is less treatable.⁴² Yet Black women show lower survival rates in comparison to other women at the same stage of diagnosis.⁵⁰

From the 1997 baseline of 67%, *HP2010* seeks to increase the proportion of women aged 40 years and older who have received a mammogram during the 2 preceding years to 70%. The HP 2010 objective for breast cancer deaths seeks to reduce deaths to 22.3 deaths per 100,000 women. As Detroit and Michigan rates are expressed per 10,000 population, this equals 2 deaths per 10,000 female residents.

COLON

Colorectal cancer is the second leading cause of cancer-related death in Michigan.^{43,§§§§} Factors that have been associated with the development of colon cancer include: a family history of colon cancer, a history of polyps (benign tumors that often precede colon cancer) inflammatory bowel disease, a diet high in fats or low in fiber, and a low level of physical activity. In some instances, colon cancer is also hereditary.⁵²

The peak colorectal cancer death rate was 3.1 at the beginning of the 1990s, as shown in Figure 24. Though the city's colorectal cancer death rate has not been as high since,

there have been several slight increases and declines. Since 1998, rates have decreased and 2.3 colorectal cancer deaths per 10,000 Detroit residents were recorded for 2000. Overall, there have been modest and steady declines in Michigan colorectal cancer deaths throughout the nineties to 2000. The rate has decreased from 2.5 per 10,000 Michigan residents in 1990 to 2.0 in 2000. *HP2010* seeks to reduce colon cancer deaths to 1 per 10,000 population. Colorectal incidence rates for years 1990-1999 are shown in Figure 25. For the State of Michigan, incidence has been fairly stable since the mid-nineties. Detroit rates of colon cancer incidence showed increases from 1996-1998, but decreased from 1998 (6.5 per 10,000 Detroit residents) to 1999 (5.6).

§§§§ The colon and rectum are parts of the body's digestive system, which removes nutrients from food and stores waste until it passes out of the body. Together, the colon and rectum form a long, muscular tube called the large bowel or intestine. The colon is the first 6 feet of the large intestine, and the rectum is the last 8 to 10 inches. Cancers of these two areas are often discussed together as colorectal cancer.

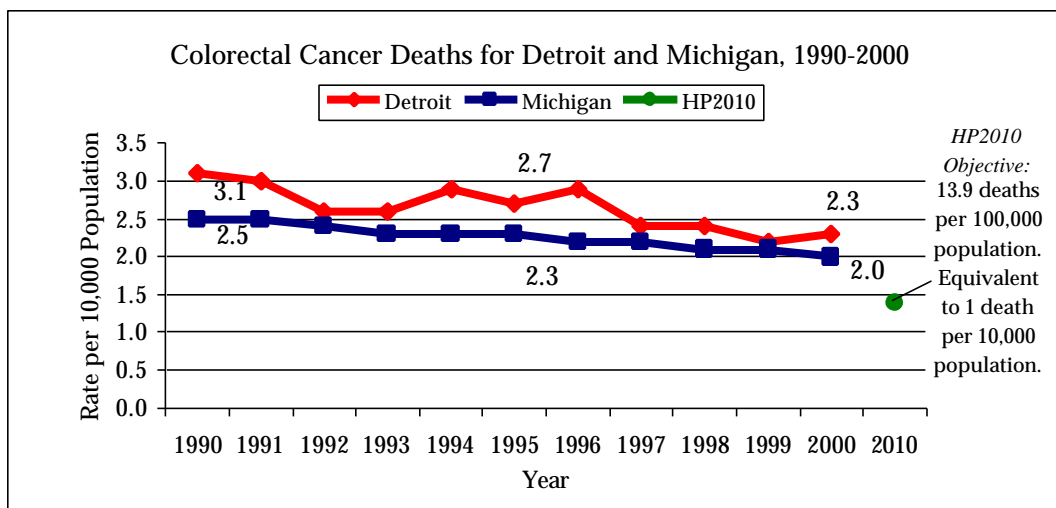


Figure 24

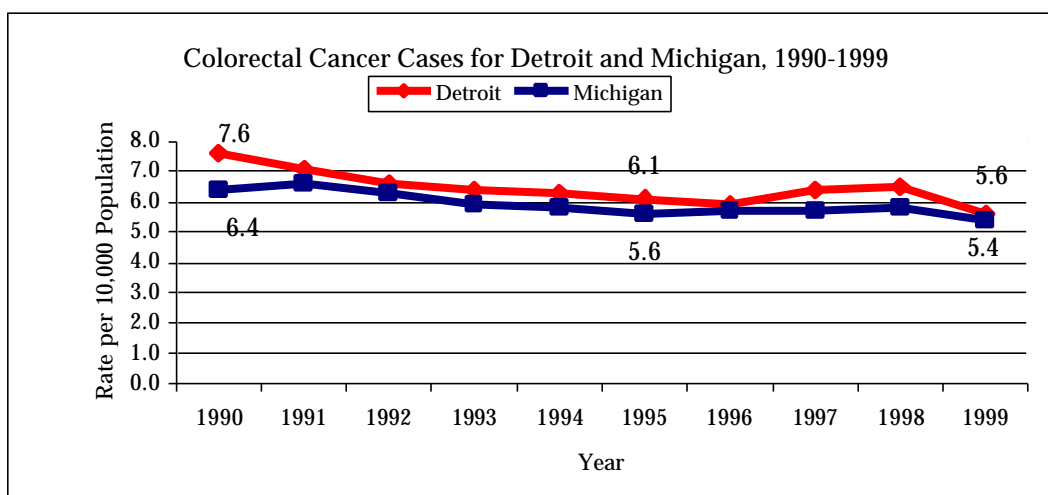


Figure 25